

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of)

PUBLIC UTILITIES COMMISSION)

Instituting a Proceeding to Investigate)
the Implementation Of Feed-in Tariffs)
_____)

Docket No. 2008-0273

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COMMISSION

HAIKU DESIGN AND ANALYSIS

OPENING STATEMENT OF POSITION

AND

CERTIFICATE OF SERVICE

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HAIKU DESIGN AND ANALYSIS

OPENING STATEMENT OF POSITION

Carl Freedman, dba Haiku Design and Analysis (HDA) respectfully offers its Opening Statement of Position (SOP) regarding the implementation of feed in tariffs for Hawaiian Electric Company, Inc., Maui Electric Company Ltd. and the Hawaii Electric Light Company, Ltd. (collectively: HECO Companies).

HDA does not propose a specific feed-in tariff design nor does it advocate specific policies and pricing methods. As explained below, HDA primarily addresses the fact that several important general issues need to be addressed before specific tariff designs or pricing methods should be decided. There are some important pieces missing from the puzzle. HDA looks forward to the SOP's filed by other parties and hopes that they may address some of the concerns HDA identified below.

(1) There are several principal objectives served by implementation of feed-in tariffs for renewable generation:

- Encouraging or maximizing the implementation of renewable generation
- Minimizing generation costs and retail rates
- Encouraging technologies that are compatible with or mitigate utility system operation and economic objectives.

Some aspects of feed-in tariff designs can promote all of these objectives without tradeoffs. Standardization of prices and contract terms can lower transaction costs and provide clear market signals. These elements reduce uncertainty and risk to prospective renewable generation resource developers (vendors) and promote investment and, other things being equal, reduce project costs.

The price and price structure of feed-in tariffs, however, tend to promote one or more of these objectives to the detriment of another objective. Higher prices, for example, would encourage implementation of renewable generation but would do so to the detriment of minimizing generation costs and retail rates.

(2) The HECO Companies and the Consumer Advocate have proposed a project cost based feed-in tariff design. This is only one of several price structures for feed in tariff designs that are possible. Different prices and price structures would meet the principal objectives for feed-in tariffs to differing degrees.

- One price for all technologies tariff would provide competition between resource types and individual vendors:

- Prices below avoided cost would provide the most economical renewable resources that would lower retail rates.
- Prices at avoided cost would provide a larger portfolio of renewable resource types and more subscription approximately maintaining the status quo for retail rates.
- Prices above avoided cost would provide subscription by the largest portfolio of resource types and the most subscription with increased retail rates.
- Separate prices or price blocks for different resource characteristics would provide competition to provide generation types and contractual arrangement that provide the most benefit to the operation and economics of the utility system:
 - On peak / off peak block pricing would encourage and provide more subscription for resources that are coincident with utility system capacity needs.
 - Dispatchable/non-dispatchable block pricing would encourage resources that could mitigate rather than exacerbate utility system integration challenges.
- Separate prices for specific types of resources could promote several objectives depending upon prices and price structure:
 - Project cost based prices could be set to be either more economical or more generous within the range of estimated project costs.

- Lower prices for each specific technology could provide competition amongst vendors for the most economic projects within each technology type.
- Generous prices for each specific technology could encourage aggressive subscription for each technology without providing excess payment to less expensive technologies.
- Prices could be set for each technology based on the merits of the technology regarding value to the operation and economics of the utility systems.
 - Higher prices could be set for those technologies that provide dispatchable generation or otherwise complement utility system operation or economics objectives.
 - Lower prices could be set for those technologies that increase ancillary services and costs or require investments in utility system infrastructure.
- Higher prices with caps on subscription could be offered to encourage investment in innovative technologies that could ultimately play a valuable role in Hawaii's resource mix.

(3) A fundamental question in this docket is whether project cost based feed-in tariffs or some other price structure is most appropriate for the HECO Companies at this time. There are several considerations that should be taken into account.

- The HECO Companies' existing utility systems can accommodate only limited amounts of new renewable generation and cannot guarantee purchase or payment of energy provided by prospective feed-in tariff vendors.
 - Neither the HECO Companies nor prospective vendors can estimate the amount of curtailment of renewable generation that will result from additional renewable generation additions to the utility systems. There are no available projections of potential curtailment probabilities.¹
 - The HECO Companies can offer no assurances regarding the maximum amount of curtailment or the minimum amounts of energy (or percentages of available energy) that would be purchased under proposed feed-in tariffs.²
- There is no generation system plan that identifies how much of each type of generation is compatible or necessary to accommodate new renewable generation.
 - It is not known how much of each type of renewable generation can be accommodated.
 - It is not known what measures, improvements and investments in utility system infrastructure would be necessary to accommodate various amounts of new renewable generation
 - It is not known when, whether or to what extent any measures being taken to accommodate substantial amounts of new renewable generation on the utility systems will be effective.

¹ See HECO/CA response to HDA?HECO-IR-1(c) & (d).

² See HECO/CA response to HDA?HECO-IR-1(a) & (b).

- There is no estimate of what impacts the proposed (or any other) feed-in tariffs will have on generation costs or retail rates. The rate impacts are entirely unknown.

(4) In light of the observations noted above, HDA offers the following statement of position at this stage of this docket:

- Prior to adopting project cost based prices or generous prices designed to maximize investment and subscription to long term feed-in tariff contracts it should be determined:
 - Whether the existing utility systems can accommodate the resulting amounts of new renewable generation without excessive curtailment of prospective vendors
 - What measures (and costs) are necessary to accommodate the resulting subscription to feed-in tariffs and what timetables are realistic to implement these measures
 - What the total costs and rate impacts of implementing the feed-in tariffs would be.
- If these questions cannot be determined, a planning process should immediately be implemented to make these determinations.
- If it is determined that there are restrictive near term limits to the amount of new renewable generation that can be accommodated, alternate feed-in tariff prices and price structures should be considered that would prioritize the most cost effective

procurement of new renewable resources or would promote resources that most directly enhance the operational and economic objectives of the utility systems.

CERTIFICATE OF SERVICE

The foregoing HAIKU DESIGN AND ANALYSIS OPENING STATEMENT OF POSITION was served by electronic transmission in PDF and Word formats on the date of signature below to the following parties in this docket except that the Division of Consumer Advocacy was also served two correct hard copies by first class mail posted on the same date:

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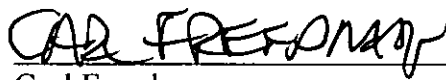
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Dated: February 24; Haiku, Hawaii

Signed:



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